

CONSTRUCTION DETAILS

- A. INSTALL NEMA SIZE '6' BASE MOUNTED CABINET AND CONTROLLER WITH ALL NECESSARY EQUIPMENT (NOTE: 2-2 IN. AND 2-4 IN. SCHEDULE 80, 90 DEGREE PVC CONDUIT BENDS). INSTALL CENTER OF FOUNDATION AT STA. 124+20, OFFSET 73 FT. LT.
- B. INSTALL 27 FT. STEEL POLE WITH 70 FT. MAST ARM, TRAFFIC SIGNAL HEADS, SIGNS, VIDEO DETECTION CAMERAS, AND 10 FT. LIGHTING ARM WITH 250 WATT HIGH PRESSURE SODIUM LUMINAIRE WITH PHOTOCCELL (NOTE: 2-3 IN. SCHEDULE 80, 90 DEGREE PVC CONDUIT BENDS). INSTALL CENTER OF 27 FT. STEEL POLE AT STA. 122+28, OFFSET 64 FT. LT.
- C. INSTALL 27 FT. STEEL POLE WITH TWIN 50 FT. AND 60 FT. (CUT TO 50 FT.) MAST ARMS, TRAFFIC SIGNAL HEADS, SIGNS, VIDEO DETECTION CAMERAS, AND 15 FT. LIGHTING ARM WITH 250 WATT HIGH PRESSURE SODIUM LUMINAIRE WITH PHOTOCCELL (NOTE: 2-3 IN. SCHEDULE 80, 90 DEGREE PVC CONDUIT BENDS). INSTALL CENTER OF 27 FT. STEEL POLE AT STA. 122+91, OFFSET 1 FT. LT.
- D. INSTALL HANDHOLE.
- E. HANDHOLE INSTALLED UNDER INTERCONNECT PLAN.
- F. INSTALL 3 IN. SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED.
- G. INSTALL 4 IN. SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED.
- H. INSTALL 4 IN. SCHEDULE 80 RIGID PVC CONDUIT - SLOTTED.
- J. 3 IN. SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED INSTALLED UNDER INTERCONNECT PLAN.
- K. 4 IN. SCHEDULE 80 RIGID PVC CONDUIT - SLOTTED INSTALLED UNDER INTERCONNECT PLAN.
- L. 4 IN. SCHEDULE 80 RIGID PVC CONDUIT - BORED INSTALLED UNDER INTERCONNECT PLAN.
- M. PROPOSED VIDEO DETECTION ZONE.
- N. INSTALL MICRO-LOOP PROBE SET AT STATION 127+07.
- P. INSTALL MICRO-LOOP PROBE SET AT STATION 118+94.
- R. EXISTING LIGHTING STRUCTURE TO BE REMOVED UNDER LIGHTING PLAN.
- S. INSTALL 1 IN. LIQUID-TIGHT, NON-METALLIC ELECTRICAL CONDUIT (DETECTOR WIRE-SLEEVE).
- T. INSTALL 24" HEAT APPLIED WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKING (STOP LINE).
- U. INSTALL 12" HEAT APPLIED WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKING (CROSSWALK).
- V. REMOVE EXISTING HANDHOLE.
- W. REMOVE EXISTING HANDHOLE UNDER INTERCONNECT PLAN.
- X. ABANDON EXISTING CONDUIT.
- Y. ABANDON EXISTING LOOP DETECTOR.

PROJECT DESCRIPTION

THIS PORTION OF THE PROJECT INVOLVES THE RECONSTRUCTION OF THE EXISTING TRAFFIC CONTROL SIGNAL AT THE U.S. 40 (BALTIMORE NATIONAL PIKE) AND KENT AVENUE / THE ENTRANCE TO WESTVIEW SHOPPING CENTER INTERSECTION IN BALTIMORE COUNTY. U.S. 40 IS ASSUMED TO RUN IN AN EAST-WEST DIRECTION.

INTERSECTION OPERATION

1. NORMAL OPERATION

THE INTERSECTION WILL OPERATE IN A NEMA FOUR PHASE FULL-TRAFFIC-ACTUATED MODE. THE EASTBOUND AND WESTBOUND U.S. 40 MOVEMENTS WILL RUN CONCURRENTLY. AN EXCLUSIVE DOUBLE LEFT TURN WILL BE PROVIDED FOR EASTBOUND U.S. 40 AND THE WESTVIEW MALL APPROACH WILL OPERATE ALONE. THE KENT AVENUE APPROACH WILL BE CONTROLLED BY A STOP CONDITION.

THIS INTERSECTION WILL OPERATE AS PART OF AN INTERCONNECT SYSTEM BETWEEN INGLESIDE AVENUE AND WINTERS LANE USING 12-PAIR COMMUNICATION CABLE.

UPON COMPLETION OF THIS PROJECT THE CONTRACTOR SHALL NOTIFY MR. ROBERT SNYDER OF SHA AT 410-787-7635 TO ARRANGE FOR THE PHONE LINE INSTALLATION. THE CONTRACTOR IS TO PROVIDE MR. SNYDER WITH THE NEAREST STREET ADDRESS, ZIP CODE, AND TELEPHONE NUMBER.

CONTROLLER REQUIREMENTS

INSTALL A FULLY-TRAFFIC-ACTUATED EIGHT PHASE TRAFFIC SIGNAL CONTROLLER WITH A VIDEO DETECTION SYSTEM, INTERSECTION MONITOR WITH BATTERY BACK-UP FOR PHONE DROP, ISOLATION BOARD, TELEMETRY EQUIPMENT, FOUR CHANNEL LOOP DETECTOR AMPLIFIERS AND ASSOCIATED HARNESSSES HOUSED IN A NEMA SIZE "6" BASE MOUNTED CABINET.

PROJECT CONTACTS

CONTACT PERSONS FOR DISTRICT 4 ARE AS FOLLOWS:

MR. RANDALL SCOTT
ASSISTANT DISTRICT ENGINEER - TRAFFIC
410-321-2781 OR 410-321-2885

MS. SUENETTE POPE
UTILITY ENGINEER
410-321-2841

MR. STEVE MARCISZEWSKI
ASSISTANT DISTRICT ENGINEER - MAINTENANCE
410-321-2764

THE POWER COMPANY REPRESENTATIVE:

MR. GARY SMITH
BGE
410-859-9433
WMS #1202636

CONTACT PERSONS FOR THE OFFICE OF TRAFFIC AND SAFETY ARE AS FOLLOWS:

MR. RICHARD DAFF SR.
CHIEF, TRAFFIC OPERATIONS
410-787-7630

MR. ROBERT SNYDER
ASSISTANT DIVISION CHIEF, TRAFFIC OPERATIONS
410-787-7630

MR. ED RODENHIZER
CHIEF, SIGNAL OPERATIONS
410-787-7650

MR. EUGENE BAILEY
CHIEF, SIGN OPERATIONS
410-787-7676

MR. MIKE STOCKER
SIGNAL SHOP WAREHOUSE
410-787-7696

CONSTRUCTION DETAILS (CONT.)

- Z. REMOVE EXISTING CONTROLLER AND CABINET.
- AA. REMOVE EXISTING STEEL POLE WITH MAST ARM, TRAFFIC SIGNAL HEADS, AND SIGNS.
- BB. REMOVE EXISTING POLE FOUNDATION TO 1 FT. BELOW GRADE.
- CC. INSTALL METERED SERVICE PEDESTAL.
- DD. INSTALL 4 IN. SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED FOR PROPOSED ELECTRICAL SERVICE.
- EE. INSTALL 2 IN. SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED FOR PROPOSED PHONE DROP.
- FF. INSTALL 2 IN. SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED FOR PROPOSED ELECTRICAL SERVICE.
- GG. INSTALL DETECTABLE WARNING SURFACE.
- HH. 4 IN. SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED INSTALLED UNDER INTERCONNECT PLAN.

EQUIPMENT LIST "A"

A. EQUIPMENT TO BE SUPPLIED BY THE SHA

SPEC. NO.	CATEGORY CODE NO.	QUANTITY	DESCRIPTION
816	971017	1 EA.	EIGHT PHASE (FULLY ACTUATED) CONTROLLED AND CABINET-BASE MOUNT SIZE SIX
816	963010	2 EA.	FOUR CHANNEL LOOP DETECTOR AMPLIFIER, RACK MOUNT
813	973023	67 S.F.	SHEET ALUMINUM SIGN
		- 1 EACH	ASSOCIATED SHIELD ASSEMBLY (24" x 51") M3-4 (24" x 12") M1-4 (24" x 24") M6-1 (21" x 15")
		- 1 EACH	ASSOCIATED SHIELD ASSEMBLY (36" x 75") M3-2 (30" x 15") M1-4 (36" x 36") M6-1 (30" x 24")
		- 4 EACH R3-5(L) (30" x 36") - 1 EACH R3-2 (36" x 36")	
---	900000	1 EA.	VIDEO INTERFACE EQUIPMENT

EQUIPMENT LIST "B"

B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR

SPEC. NO.	CATEGORY CODE NO.	QUANTITY	DESCRIPTION
104	120500	L.S.	MAINTENANCE OF TRAFFIC
205	203030	2 C.Y.	TEST PIT EXCAVATION
556	585620	330 L.F.	12 INCH HEAT APPLIED WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKINGS (CROSSWALK)
556	585624	160 L.F.	24 INCH HEAT APPLIED WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKINGS (STOP LINE)
611	655120	55 S.F.	DETECTABLE WARNING SURFACE FOR CURB RAMPS
801	801004	13 C.Y.	CONCRETE FOR SIGNAL FOUNDATION
810	802501	525 L.F.	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
805	805125	115 L.F.	2 INCH SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
805	805135	25 L.F.	3 INCH SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
805	805140	15 L.F.	4 INCH SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
805	805155	425 L.F.	4 INCH SCHEDULE 80 RIGID PVC CONDUIT - SLOTTED
805	805160	30 L.F.	1 INCH LIQUID-TIGHT FLEXIBLE NON-METALLIC CONDUIT FOR DETECTOR SLEEVE
807	807202	1 EA.	METERED SERVICE PEDESTAL
---	810550	3 EA.	MICROLOOP PROBE, 500 FOOT LEAD IN CABLE
---	810555	3 EA.	MICROLOOP PROBE, 1000 FOOT LEAD IN CABLE
811	811001	2 EA.	FURNISH AND INSTALL ELECTRICAL HANDHOLE
811	811002	3 EA.	REMOVE ELECTRICAL HANDHOLE
813	813015	67 S.F.	INSTALL OVERHEAD SIGN
816	816001	4 EA.	VIDEO DETECTION CAMERA
816	816010	4 EA.	CONTROL CABLE, 500 FOOT, VIDEO DETECTION CAMERA TO CONTROLLER
818	818050	1 EA.	STEEL POLE WITH TWIN 50 FOOT AND 60 FOOT MAST ARMS
818	818052	1 EA.	STEEL POLE WITH SINGLE 70 FOOT MAST ARM
806	831010	2 EA.	250 WATT HIGH PRESSURE SODIUM LAMP AND LUMINAIRE WITH PHOTOCCELL
810	832017	115 L.F.	CABLE - 1 CONDUCTOR, NO. 4 A.W.G., TYPE USE, 600V
804	837001	7 EA.	GROUND ROD - 3/4 INCH DIAMETER X 10 FOOT LENGTH
814	860272	24 EA.	12 INCH VEHICULAR SIGNAL HEAD SECTION
810	861107	1,375 L.F.	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 A.W.G.)
810	861116	600 L.F.	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 12 A.W.G.)
815	862102	225 L.F.	SAW CUT FOR SIGNAL (LOOP DETECTOR)
818	866101	1 EA.	10 FOOT LIGHTING ARM ON SIGNAL STRUCTURE
818	866103	1 EA.	15 FOOT LIGHTING ARM ON SIGNAL STRUCTURE
816	871117	1 EA.	INSTALL EIGHT PHASE (FULLY ACTUATED) CONTROLLER AND CABINET - BASE MOUNT
---	800000	L.S.	REMOVE AND DISPOSE OF EXISTING MATERIALS AND EQUIPMENT

EQUIPMENT LIST "C"

C. EQUIPMENT TO BE REMOVED BY THE CONTRACTOR AND DELIVERED TO THE STATE HIGHWAY ADMINISTRATION, 7491 CONNELLEY DRIVE, HANOVER, MARYLAND 21076.

SHA FORCES SHALL REMOVE THE CONTROLLER AND ALL AUXILIARY EQUIPMENT FROM THE CONTROLLER CABINET. THE CABINET AND ALL OTHER MATERIALS TO BE REMOVED BY THE CONTRACTOR SHALL BECOME THE PROPERTY OF THE CONTRACTOR



RUMMEL, KLEPPER
& KAHL, LLP

CONSULTING ENGINEERS

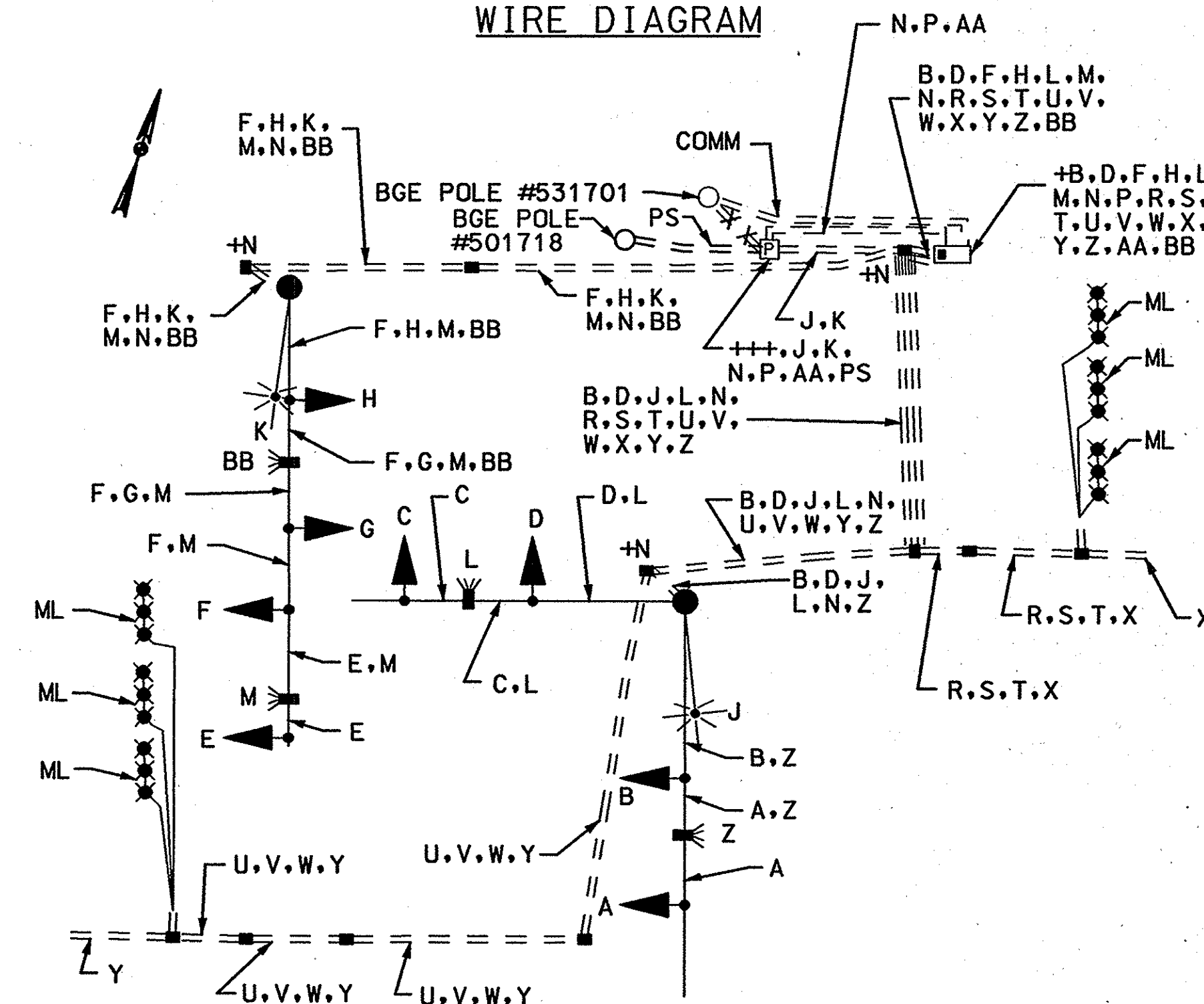
81 MOSHER STREET
BALTIMORE, MARYLAND 21217

TELE: 410/728-2900 FAX: 410/383-3270

PHASE CHART

	1	2	3	4	5	6	7	8	
PHASE 1+6	→G	→G	G	G	R	R	→R	→R	→
1+6 CHANGE	→Y	→Y	G	G	R	R	→R	→R	→
PHASE 2+6	→R	→R	G	G	G	G	→R	→R	→
2+6 CHANGE	→R	→R	Y	Y	Y	Y	→R	→R	→
PHASE 4	→R	→R	R	R	R	R	→G	→G	→
4 CHANGE	→R	→R	R	R	R	R	→Y	→Y	→
FLASHING OPERATION	FL/→R	FL/→R	FL/Y	FL/Y	FL/Y	FL/Y	FL/→R	FL/→R	→

WIRE DIAGRAM



NOTE: THE CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL UNUSED ELECTRICAL CABLES.

WIRING LEGEND

A,B,C,D,E, F,G,H	5-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
J,K	2-CONDUCTOR ELECTRICAL CABLE (NO. 12 A.W.G.)
L,M,Z,BB	VIDEO DETECTION CAMERA TO CONTROLLER CABLE
N	STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)
P,AA	1-CONDUCTOR (NO. 4 A.W.G.)
R,S,T,U,V,W	MICRO-LOOP PROBE LEAD-IN CABLE
X,Y	12-PAIR JELLY-FILLED COMMUNICATION CABLE (INSTALLED UNDER INTERCONNECT PLAN)
+ -	3/4" x 10' GROUND ROD
PS	PROPOSED POWER SERVICE UNDERGROUND
ML	MICRO-LOOP PROBE
COMM	PROPOSED PHONE DROP

SG-2 OF SG-6

REVISIONS

1	MODIFIED POWER FEED SERVICE	09/19/05
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SHA MARYLAND DOT - STATE HIGHWAY ADMINISTRATION

Office of Traffic & Safety

TRAFFIC ENGINEERING DESIGN DIVISION

U.S. 40 & KENT AVENUE / ENTRANCE TO
WESTVIEW SHOPPING CENTER

GENERAL INFORMATION SHEET

DRAWN BY: ADL	F.A.P. NO. BA3895172	TS NO. 194 C	SHEET NO. 75 OF 101
CHECKED BY: BLB	COUNTY: BALTIMORE	T.I.M.S. NO. G 250	
SCALE: NONE	LOG MILE: 03004002.69		
DATE: AUGUST 2004			